

WHAT IS CLAIMED IS:

1. A digital watermark information detection method for detecting information inserted as a digital watermark from contents, comprising:

 a first step of converting said contents into a predetermined specified format; and

 a second step of trying to detect information from said converted contents.

2. A digital watermark information detection method according to claim 1, wherein when a plurality of specified formats are defined in advance and detection of the information from said converted contents fails, said contents is converted into a specified format other than that used in said first step to retry detection of the information.

3. A digital watermark information detection method according to claim 2, wherein priority orders are set in advance to said plurality of specified formats and said first and second steps are repeated in accordance with the priority orders until the information detection succeeds.

4. A digital watermark information detection method according to claim 3, wherein in said second step, the number of successful information detection operations is recorded in respect of the specified format and the priority orders of said plurality of specified formats are updated in accordance with the number of successful information detection operations.

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5. A digital watermark information detection method according to claim 1, wherein a specified format is defined with respect to each format of the contents.

6. A digital watermark information detection apparatus for detecting information inserted as a digital watermark from contents, comprising:

a conversion unit for converting said contents into a predetermined specified format; and
an information detection unit for trying to detect information from said converted contents.

7. A digital watermark information detection program for detecting information inserted as a digital watermark from contents, comprising codes for executing the following steps:

a first step of converting said contents into a predetermined specified format; and

a second step of trying to detect information from said converted contents.

8. A digital watermark embedding method adapted to the digital watermark information detection method according to claim 1, comprising the steps of:

acquiring information of a specified format used in the course of detection of digital watermark information;

acquiring a conversion rule used for conversion of the present format into said specified format; and

embedding the watermark information such that

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the watermark information is not lost even when said conversion rule is applied.

9. A digital watermark information detection method for detecting digital watermark information from contents data, comprising:

 a preliminary process for trying to detect information corresponding to at least one bit; and

 a main process for reading all watermark information when the information detection is successful in the preliminary process.

10. A digital watermark information detection method according to claim 9, wherein in said preliminary process, the presence/absence of digital watermark information is decided in respect of said contents data on the basis of information concerning at least one kind of data transformation supposed to be applied to said contents data.

11. A digital watermark information detection method according to claim 10, wherein a decision operation is carried out in respect of the contents data to decide the presence/absence of digital watermark information from a result of the decision operation, and in said preliminary process, the information concerning data transformation is inputted as a parameter to the decision operation.

12. A digital watermark information detection method according to claim 11, wherein a parameter prevailing when the presence of digital watermark

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information is determined in said preliminary process is used to read the watermark information in said main process.

13. A digital watermark information detection method according to claim 11, wherein parameters are prepared for a plurality of data transformations, respectively, in said preliminary process and when the presence of digital watermark information is not determined with a certain parameter, the decision operation is again carried out with another parameter.

14. A digital watermark information detection method according to claim 13, wherein priority orders are set in advance to parameters corresponding to a plurality of data transformations and the parameters are applied in accordance with the priority orders to repeat the decision operation until the information detection succeeds.

15. A digital watermark information detection method according to claim 14, wherein the number of decision operations in which the presence of digital watermark information is determined in respect of said parameter is recorded and the priority orders of said plurality of parameters are updated in accordance with the number of decision operations.

16. A digital watermark information detection method according to claim 11, wherein said parameters are defined format with respect to each format of the contents data.

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17. A digital watermark information detection method according to claim 11, wherein in the preliminary process, the contents data is converted into a specified format.

18. A digital watermark information detection apparatus for detecting digital watermark information from contents data, comprising:

a preliminary process unit for trying to detect information corresponding to at least one bit;

a main process unit for reading all watermark information when in the preliminary process unit, the information detection is successful.

19. A digital watermark information detection program for detecting digital watermark information from contents data, comprising codes for executing the following processes:

a preliminary process for trying to detect information corresponding to at least one bit; and

a main process for reading all watermark information when in the preliminary process, the information detection is successful.